



Problem C

Construct uwu

Time limit: 4 seconds
Memory limit: 1 GB

Problem Description

You are given a positive integer N .

Construct a **minimal** length string S consisting of letters 'u' and 'w' only, satisfying the following condition:

- The number of subsequences of S which equal "uwu" is exactly N . Note that a subsequence need not be continuous.

It can be proven that at least one valid string exists. You have to find the shortest possible string for each test. The input is generated in such a way that the sum of the lengths of the minimal strings is at most 10^7 over all test cases.

Input Format

- The first line of input contains a single integer T , denoting the number of test cases.
- The first and only line of each test case contains N — the required number of subsequences.

Output Format

For each test case, output a **minimal** length string S with exactly N "uwu" subsequences.

Constraints

- $1 \leq T \leq 10^3$
- $1 \leq N \leq 10^{18}$
- The sum of the minimum lengths of the required strings does not exceed 10^7 .

Samples

Sample Input 1

```
6
1
2
3
4
5
6
```

Sample Output 1

```
uwu
uwuu
uwwuu
uwwuu
uwwwwwu
uwwuu
```



Sample Explanation

Test Case 1: "uwu" has exactly one subsequence which equals "uwu", which is the whole string itself.

Test Case 2: "uwuw" has 2 subsequences which equal "uwu", using 1-based indexing:

- The subsequence formed by indices (1, 2, 4).
 - The subsequence formed by indices (1, 3, 4).
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